

Remarks

The Office Action mailed January 24, 2005 has been carefully reviewed and the following remarks are made in consequence thereof.

Claims 1-20 are now pending in this application. It is respectfully submitted that the pending claims define allowable subject matter.

The rejection of Claims 1-20 under 35 U.S.C. § 103 as being unpatentable over Koyasu et al. (U.S. Patent Application Publication 2003/0205402) in view of Clark (U.S. Patent Application Publication No. 2004/0256139) is respectfully traversed.

It is respectfully submitted, for the reasons set forth below, that a prima facie case of obviousness has not been established. More specifically, it is submitted that the cited references collectively fail to teach each recitation of the presently pending claims, and that there is no motivation to combine the teaching of the cited references in the manner set forth in the Office Action.

The Office Action cites Figures 3, 5 and 6 of Koyasu et al. as disclosing a cable having a cylindrical core, at least one twisted pair of insulated wires, and a jacket surrounding the core. It is acknowledged in the Office Action that Koyasu et al. does not disclose the jacking as having a spline projecting inward from an inner surface of the jacket.

Clark is cited as disclosing a jacket in Figure 11 surrounding a core and having at least one spline projecting inward from an inner surface of the jacket. However, Clark describes no such jacket. In relation to Figure 11, Clark discloses an insulated electrical conductor that may be used in data cables, such as twisted pair cables. Clark does describe a twisted pair cable (160) having a jacket (164) in relation to Figure 8, but the jacket (164) clearly does not include splines.

The present invention is clearly directed to a cable, and the disclosure of Clark with respect to Figure 11 does not relate to the structure of the cables or a jacket for a cable, but rather to the conductors which are received in the cable jacket. The cable jacket disclosed in Figure 8 of Clark is similar to the cable jacket disclosed in Koyasu, which the Office Action concedes does not include the recited splines. It is therefore respectfully submitted that Clark adds nothing to the teaching of Koyasu et al. with respect to the present invention.

Clark discloses, in relation to Figure 11, an insulating conductor (190) having dual insulation layers (190), (192) surrounding a metal core (112). The first insulating layer (192) defines openings or indentations (194) spaced about an inner circumference of the first insulating layer. The Office Action asserts that the space between adjacent cells (194) are the recited splines. However, the spaces of the insulating layer (192) are not fairly characterized as extending from an inner surface of the layer (192), and there is no disclosure in Clark that the spaces between the cells (154) in any way restrict relative movement of the layer (192) with respect to the core (112). Rather, Clark explains that the open cells (194) that reduce the effective dielectric constant of an insulating layer (192) to reduce near-end cross talk (NEXT) with an adjacent conductor.

The Office Action asserts that it would have been obvious to include the jacket of Koyasu et al. with the construction of Clark to reduce the effective dielectric constant of the jacket. In response, Applicants again note that Figure 11 of Clark relates to a conductor and not to a cable jacket, and Clark nowhere suggests that modifying the cable jacket to reduce its effective dielectric constant would be desirable or advantageous, or that the same would be effective to reduce NEXT in adjacent cable pairs. In fact, the NEXT issue appears to be entirely unrelated to the present invention. Clark nowhere describes the problem toward which the present invention is directed, namely to prevent relative movement of a cable jacket with respect to a core and preserve headroom of the cable without introducing additional cost and complexity to the cable

which may impair its flexibility. It is respectfully submitted that one of ordinary skill at the time the invention was made would not look to Clark as providing a solution to the difficulties faced.

Still further, Koyasu et al. does not recognize the particular problem toward which the present invention is directed, namely to prevent relative movement of the cable jacket with respect to the core and preserve headroom of the cable without introducing additional cost and complexity to the cable which may impair its flexibility. As presently understood, Koyasu et al. only address the problem of the twisted pairs in the cable moving relative to one another within the jacket of the cable. Thus, absent some reason why the structure of the present claims would be desirable in the cable of Koyasu et al. to prevent the relative movement between the cable jacket and the cable core, which Applicants submit is not found in the Koyasu et al. or the Clark references, there is no motivation for one of ordinary skill in the art to make the proposed modification to the Koyasu et al. cable to render the invention obvious.

Thus, neither Koyasu et al. or Clark, separately or in combination, recognize the particular problems addressed by the present invention or describe or suggest any structure that would overcome these problems. Consequently it is respectfully submitted that the combination of teachings does not render the instant claims obvious.

Claim 1 recites a cable comprising “a cylindrical core comprising at least one twisted pair of insulated wires,” and “a jacket surrounding said core, said jacket comprising at least one spline projecting inward from an inner surface of said jacket, wherein at least a portion of said twisted pair is positioned between said spline and a center of said core, thereby preventing relative movement of said jacket with respect to said core.”

It is respectfully submitted that Koyasu et al. in view of Clark is not suggestive of the present invention. As noted above, neither the Koyasu et al. cable nor the Clark conductor include any structure that would prevent relative movement of a jacket with respect to the core,

and consequently each of the Koyasu et al. cable and the Clark conductor lack the structure and function recited in claim 1.

For the reasons set forth above, claim 1 is submitted to be patentable over Koyasu et al. in view of Clark.

Claims 2-9 depend from claim 1, and when the recitations of claim 2-9 are considered in combination with the recitations of claim 1, claims 2-9 are likewise submitted to be patentable over Koyasu et al. in view of Clark.

Claim 10 recites a cable comprising “a core comprising a central core filler and a plurality of twisted pairs of insulated wires extending about said core filler” and “a jacket surrounding said core, said jacket comprising a round inner surface and at least one spline projecting inward from said inner surface, wherein said at least one spline is adapted to prevent relative movement of said jacket and core without separating one of said plurality of twisted pairs from another of said plurality of twisted pairs.”

For the reasons set forth above, Koyasu et al. and Clark, considered separately and combination, fail to describe or suggest the structure and function of the cable recited in claim 10, and claim 10 is accordingly submitted to be patentable over Koyasu et al. in view of Clark.

Claims 11-18 depend from claim 10, and when the recitations of claims 11-18 are considered in combination with the recitations of claim 10, Applicants submit that claims 11-18 are likewise patentable over Koyasu et al. in view of Clark.

Claim 19 recites a cable comprising “a round core comprising a central core filler and a plurality of twisted pairs of insulated wires extending about said core filler” and “a round jacket surrounding said core, said jacket comprising an inner surface and a plurality of splines projecting inward from said inner surface, wherein said plurality of splines are adapted to

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prevent relative movement of said jacket and core without separating said plurality of twisted pairs from one another."

Neither of Koyasu et al. nor Clark, considered separately or in combination, describe or suggest a cable having a jacket comprising an inner surface and a plurality of splines projecting inward from the inner surface, wherein the plurality of splines are adapted to prevent relative movement of the jacket and core without separating the plurality of twisted pairs from one another. Claim 19 is therefore submitted to be patentable over Koyasu et al. in view of Clark.

Claim 20 depends from claim 19, and when the recitations of claim 20 are considered in combination with the recitations of claim 19, claim 20 is likewise submitted to be patentable over Koyasu et al. in view of Clark.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1-20 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,


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